

Title (en)  
Successive comparison type analog-to-digital converting apparatus

Title (de)  
Mit schrittweiser Annäherung arbeitendes Analog-Digitalwandlungsgerät

Title (fr)  
Dispositif de conversion analogique-numérique à approximation successive

Publication  
**EP 0372548 B1 19960626 (EN)**

Application  
**EP 89122556 A 19891207**

Priority  
JP 30960188 A 19881207

Abstract (en)  
[origin: EP0372548A2] Disclosed is a successive comparison type analog-to-digital converter. To attain a reduced size and cost by decreasing the bit number of the D/A converter. The A/D converter comprises a comparator for comparing an analog input voltage (VIN ) and an analog comparison voltage (301) to obtain a digital output signal, wherein, before the analog comparison voltage (VC) becomes lower than the analog input voltage (VIN ) for the first time after the A/D conversion starts, the second digital signal (601) is changed in response to a first clock signal (CLK1) so as to decrease the reference voltage (VREF), and the first digital signal (501) output from the first register (31) is not changed; and after the analog comparison voltage (Vc) becomes lower than the reference voltage (VREF) for the first time after the A/D conversion starts, the second digital signal (601) is not changed so that the reference voltage (VREF) is kept constant, and the first digital signal (501) is changed in response to a second clock signal (CLK2) and in response to the digital output signal (201) from the comparator (11) so as to change the analog comparison voltage (V c).

IPC 1-7  
**H03M 1/18**; **H03M 1/46**

IPC 8 full level  
**H03M 1/46** (2006.01); **H03M 1/68** (2006.01)

CPC (source: EP KR US)  
**H03M 1/12** (2013.01 - KR); **H03M 1/46** (2013.01 - EP US); **H03M 1/68** (2013.01 - EP US)

Cited by  
EP1936810A1; CN106486072A; US9755657B2; WO9734374A1; WO2008077752A1

Designated contracting state (EPC)  
DE GB

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**EP 0372548 A2 19900613**; **EP 0372548 A3 19920527**; **EP 0372548 B1 19960626**; CA 2004317 A1 19900607; CA 2004317 C 19931130; DE 68926734 D1 19960801; DE 68926734 T2 19961212; KR 900011161 A 19900711; KR 920010218 B1 19921121; US 5028926 A 19910702

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**EP 89122556 A 19891207**; CA 2004317 A 19891130; DE 68926734 T 19891207; KR 890018105 A 19891207; US 44707489 A 19891207